

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A system for managing packets incoming to a data router comprising:
 - a local packet memory (LPM) mapped into pre-configured memory units, to store packets for processing, each of said pre-configured memory units being resizable by said system;
 - an external packet memory (EPM) for storing overflow data which is not storable by said LPM;
 - a first storage system coupled to said LPM, to determine the size of said packets to be stored in said LPM, and for determining whether said packets can be stored in said LPM to store packets in the LPM; and
 - a second storage system coupled to said first storage system, for receiving an indication from said first storage system when it cannot store said packets in said LPM to store packets in the EPM, and for storing said packets in said EPM;
 - ~~characterized in that the~~ wherein said first storage system attempts to store all incoming said packets in the said LPM, and for those packets that are not compatible with the storable within said LPM, relinquishes control to the said second system, which stores the LPM-incompatible said packets in the said EPM; and
 - wherein said system evaluates the size of said pre-configured memory units based on the size of said packets, and resizes said memory units to minimize fragmentation.
2. (currently amended) The system of claim 1 wherein ~~the said~~ first storage system is hardware controlled and ~~the said~~ second storage system is software-controlled.

3. (canceled)
4. (original) The system of claim 1 wherein the data router is connected to and operates on the Internet network.
5. (original) The system of claim 1 wherein the data router is connected to and operates on a corporate wide-area-network (WAN).
6. (original) The system of claim 2 wherein the first storage system is implemented as an integrated circuit (IC) or IC chip set.
7. (currently amended) The system of claim 1 wherein ~~the~~ said first storage system provides a memory address to ~~the~~ said second storage system ~~in the event of upload of a packet into the second memory~~ if said packets cannot be stored in said EPM.
8. (currently amended) A data packet router comprising:

external ports to receive and send data packets from and to neighboring connected routers; and

a system, coupled to said external ports, for managing said packets incoming to a data router, the system comprising:

 - ~~having~~ a local packet memory (LPM) mapped into pre-configured memory units, to store packets for processing, each of said pre-configured memory units being resizable by said system;
 - ~~an~~ external packet memory (EPM) for storing overflow data which is not storable by said LPM;
 - [[,]] a first storage system coupled to said LPM, to determine the size of said packets to be stored in said LPM, for determining whether said packets can be stored in said LPM, and to store packets in the said LPM; and
 - a second storage system coupled to said first storage system, for receiving an indication from said first storage system when it cannot store

said packets in said LPM and for storing said packets in said EPM;
~~to store packets in the EPM;~~

~~characterized in that the wherein~~ said first storage system attempts to store
all incoming said packets in the said LPM, and for those packets
that are not compatible with the storable within said LPM,
relinquishes control to the said second system, which stores the
LPM-incompatiblesaid packets in the said EPM; and

wherein said system evaluates the size of said pre-configured memory
units based on the size of said packets, and resizes said memory
units to minimize fragmentation.

9. (currently amended) The router of claim 8 wherein ~~the said~~ first storage system is hardware-controlled and ~~the said~~ second storage system is software-controlled.
10. (canceled)
11. (original) The router of claim 8 wherein the data router is connected to and operates on the Internet network.
12. (original) The router of claim 8 wherein the data router operates on a corporate wide-area-network.
13. (currently amended) A method for managing packets incoming to a data router, comprising the steps of:
 - (a) attempting to store all incoming packets, by a first storage system, into a local packet memory (LPM) that is mapped into preconfigured but resizable memory units;
 - (b) relinquishing packets ~~incompatible with the~~ not storable within the LPM to a second storage system; ~~and;~~
 - (c) storing ~~the LPM-incompatible~~ the packets not storable within the LPM in an external packet memory by a second storage system; ~~and~~
 - (d) examining the size of the packets to determine whether the memory units should be resized to reduce fragmentation.
- ~~14. The method of claim 13~~

~~wherein the data router is connected to and operates on the Internet network.~~

14. (original) The method of claim 13 wherein the first storage system is hardware controlled and the second storage system is software controlled.
15. (original) The method of claim 13 wherein in the data router is connected to and operates on a corporate wide-area-network (WAN).
16. (canceled)
17. (original) The method of claim 13 wherein the first and second storage systems are implemented as an integrated circuit (IC) or IC chip set.
18. (original) The method of claim 17 wherein in step (c) the second storage system is software-controlled.
- 19-28. (canceled)